

ABSTRACT OF THE DISCLOSURE

A method for estimating relative remaining film thickness distribution (CMP pattern ratio distribution) among sparse and dense active regions after CMP on the basis of the layout of a mask pattern in a one-chip mask region. In each mask pattern, a reduced region is created by removing an area of a predetermined width from the mask pattern along the edge of the mask pattern. Then, the one-chip mask region is segmentalized into predetermined regions to create a plurality of segmentalized regions. On each of the segmentalized regions, the area ratio of all reduced regions occupying a region that includes a segmentalized region at a fixed position and has the same size and shape as those of the foregoing one-chip mask region is acquired. Based on the acquired area ratio, the distribution of remaining film thickness of a surface protection film in the one-chip mask region, i.e., the CMP pattern ratio, is acquired.